

Programmable Bargraph Indicator TC600

- ◆ 4-digit LED display plus 50-dot bargraph
- ◆ Various input signals and nonlinearities
- ◆ Programmable ranges and alarms
- ◆ Programmable relay and linear outputs
- ◆ Serial interface available
- ◆ Self-testing and self-calibration

TC600 is a microprocessor-based programmable process indicator with alarm relay outputs. In addition to the digital display, indicating the measured value, the device features a 50-dot LED bar-graph, showing the input value as a percentage of the input range. A changeable front-panel tag indicates the measurement unit. TC600 accepts standard current or voltage signals as well as signals from various thermoresistances and thermocouples. The device software allows programming display range, alarm value and type, and various nonlinear input-to-display transformations. Besides the relay alarm outputs, the indicator may be equipped with a digital interface and an analog retransmission output. The low price and the rich set of functions make TC600 widely applicable in industry and especially in power plants.



Technical specifications

Input

Pt50...1000 (w=1.385, 1.391)	-99.9(-200)...199.9(800) °C
Cu50, Cu100 (w=1.426, 1.428)	-50.0...199.9 °C
Other RTD ⁽¹⁾	min. -200...max. 1000 °C
Thermocouple "J"	-100...900 °C
Thermocouple "K"	0...1200 °C
Thermocouple "S"	0...1600 °C
Other thermocouple ⁽¹⁾	min. -200...max. 2400 °C
Linear voltage 0...10 V	-1999...9999 ⁽²⁾
Linear current 0(4)...20 mA	-1999...9999 ⁽²⁾
Custom linear voltage; max. 40 V ⁽¹⁾	min. -1999...max. 9999 ⁽²⁾
Custom linear current; max. 50 mA ⁽¹⁾	min. -1999...max. 9999 ⁽²⁾
Decimal point selection	programmable
Digital-display range	programmable
Bargraph range	programmable
Nonlinear transformation	up to 6 conversion modules
Outputs (up to 2 relay and 1 analog)	
Relay electromechanical	5A/250V with NO/NC contact
Solid state relay ⁽³⁾	1A/250VAC
MOS gate ⁽³⁾	0.1A/60V, optically isolated
Output for external SSR	5...24 V, 30 mA
Alarm set point	programmable
Analog retransmission output	4(0)...20 mA or 0...10 V, isolated
Serial interface ⁽³⁾	RS232 or RS485, isolated
Accuracy	
Measurement error	0.4% from span
Temperature drift	0.01% from span for 1 °C
Cold junction compensation	hardware, ± 1 °C

Power supply

Mains supply voltage	230 VAC or 115 VAC
SMPS voltage	90...250 V
Isolated low voltage	12...24 V or 24 VAC
Non-isolated low voltage	12...24 V
Consumption	max. 5 VA

Indication and controls

Digital display	4 LED indicators
Bargraph display ⁽⁴⁾	50 LED dots
LEDs	2 LEDs for output state
Keyboard	4 membrane keys

Operating conditions

Ambient temperature	-10...65 °C
Ambient humidity	0...85 %RH

Design and materials

	'B'	'D'
Front dimensions [mm]	96x96	144x72
Mounting	panel	panel
Panel cutout [mm]	90x90	136x66
Mounting depth [mm]	98	92
Display digit height [mm]	9	14
Bargraph shape	240° arc	horizontal bar
Maximum weight [g]	650	650
Protection, front/terminals	IP54 / IP20	IP54 / IP20
Case material	plastic	plastic
Wiring	plug-in terminals	plug-in terminals

⁽¹⁾ Custom; specify range within the limits stated

⁽²⁾ Provides loop supply voltage - 24 VDC (only w/ isolated power supply)

⁽³⁾ Ask for availability!

⁽⁴⁾ Custom display or/and scale design is also available. Ask!

Ordering code TC600 - G0.G1.G5G5.G6'6".G9'9".G11 - #1

Code	Feature or option	Code values
G0	Case (front size)	B - 96x96 mm, D - 144x72 mm
G1	Power supply	A - 230 VAC, B - 115 VAC, C - 90...250 V, P - 12...24 V, non-isolated, Q - 12...24 V, isolated, R - 24 VAC
G5	Relay output	X - none, C - relay NO/NC, D - SSR ⁽³⁾ , J - for external SSR, M - isolated MOS gate ⁽³⁾
G6'	Input signal	B - thermoresistance, C - thermocouple, D - linear, Z - other on request
G6"	RTD	B - Pt50, D - Pt100, F - Pt500, G - Pt1000, H - Cu50, K - Cu100, Z - other ⁽¹⁾
	T/C	J - "J", K - "K", S - "S", Z - other ⁽¹⁾
	linear	B - 0...20 mA, C - 4...20 mA, K - 0...10 V, Z - other ⁽¹⁾
G9'	Serial interface	X - none, A - RS232 ⁽³⁾ , B - RS485 ⁽³⁾
G9"	Protocol	A - ASCII, C - ASCII for "PolyMonitor"
G11	Analog retransmission output	X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V
#1	Nonlinear transformation	X - none, HC - horizontal cylinder, LC - lying cylindrical tank, SC - standing cylindrical tank, SN - standing conical tank, SP - spherical tank, QR - square root, Z - other